



## CODE CLARIFICATION

Date Issued:	September 12, 2008	CC #	06-01
Topic:	Combustible Concealed Spaces		
Code Section(s):	N.F.P.A. 13 Section 8.14, 2002 Edition		
Requested By:	Entire Staff		

**Question:** Please provide clarification on when we must protect, either through automatic fire sprinklers or filling the entire space with non-combustible installation, combustible concealed spaces.

**Clarification:** The purpose of N.F.P.A. 13 is to provide a reasonable degree of protection for life and property from fire. To accomplish this, N.F.P.A. 13 requires that sprinklers be provided throughout the premises. However, certain N.F.P.A. 13 provisions do allow for the omission of sprinklers from certain areas under certain conditions. Section 8.14 defines some of these situations and conditions. Clearly, if the concealed space is constructed entirely of non-combustible or limited combustible materials and the space contains no potential ignition sources, sprinklers may be omitted. However, when the concealed space is constructed with combustible materials, the intent is to provide fire protection.

It has been the stated practice of this department to require protection in combustible concealed spaces where the space formed by studs or joists exceeds six (6) inches between the insides edges of the studs or joists (8.14.1.2.3). This protection is accomplished either through the installation of fire sprinklers or by entirely filling the space with non-combustible insulation. However, Section 8.14.1.2.14 allows the omission of fire protection in *“Vertical pipe chases under 10 square feet where provided that in multi-floor buildings the chases are fire stopped at each floor using materials equivalent to the floor construction, and where such pipe chases shall contain no sources of ignition, piping shall be noncombustible, and pipe penetrations at each floor shall be properly sealed and shall not require sprinkler protections.”* The Automatic Sprinkler Systems Handbook, 1999 Edition, states that this exception was added in the 1999 edition of N.F.P.A. 13 due to the **impracticality** of installing sprinklers in small spaces and **where combustibles or ignition sources will not be present**. It would then seem logical to interpolate that other chases, or concealed spaces, that are less than 10 square feet that contain no ignition sources and contain no combustible storage, that fire protection may be omitted.

Additionally, the opening language of 8.14.1.1 states that *“All concealed spaces enclosed wholly or partly by exposed **combustible** construction shall be protected by sprinklers...”* Given this, it is again logical to interpolate that if a concealed space is enclosed wholly or partly with **non-combustible** construction (sheetrock or stucco), then we may omit fire protection from the concealed space.



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Given these two interpolations of N.F.P.A. 13, it will be the practice of the Roseville Fire Department, to allow the omission of fire protection from combustible concealed spaces if each of the following conditions are met:

1. The concealed space is less than 10 square feet and no greater than 160 cubic feet, measured interior stud face to stud face.
2. There are no potential ignition sources contained in the space.
3. There can be no storage or presence of combustible materials other than that required to construct the concealed space.
4. The concealed space shall be enclosed from the exterior side of the space with non-combustible materials.
5. Fire-stopping shall be installed at each floor using the materials equivalent to the floor construction.

If any of these conditions are not satisfied, then the combustible concealed space shall be protected with either fire sprinklers installed per the requirements of N.F.P.A. 13 or shall be entirely filled with non-combustible insulation.

If all these conditions are satisfied and the space is then not required to have fire protection, the unsprinklered combustible concealed space shall not require a minimum design area of sprinkler operation of 3000 square feet.

For Further Clarification:	Tim Ippolito, Assistant Fire Marshal
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